# 2018 to 2021 International Existing Building Code Overview

Presented by
Colorado Code Consulting, LLC

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- Over 25 years in Building Code Enforcement and Administration
- Combination Building Inspector since 1992
- Plans Examiner since 1996
- Recovering CBO, 8 years with City of Lakewood
- Code consultant, inspector, plans examiner, instructor with CCC & Shums Coda Associates 6 + years
- Past member ICC IEBC Committee during 2009 & 2012 code cycle and reappointed to committee for 2024 cycle
- Past member ICC IBC General Committee during 2015 code cycle

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## What are we Going to Talk About?

- Applicability and relationship Existing Building Code to buildings undergoing repair, improvements, additions or change of use
- Major topics addressed include:
  - Non-structural provisions
  - Regulation of additions, alterations and repairs
  - Change of occupancy considerations
  - Compliance alternatives
  - Applications of the Existing Building Code
  - Changes from 2018 to 2021
  - Several section changes took place without changing content

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## 101.2
## Scope

- Existing Buildings
  - Repair
  - Alteration
  - change of occupancy
  - Addition
  - Relocation of existing buildings
- Except IRC Buildings can comply with either IRC or IEBC

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## 101.4 Applicability


- This code shall apply to the repair, alteration, change of occupancy, addition and relocation of existing buildings, regardless of occupancy.
- Work regulated by chapter 11 of the IFC shall comply with both codes

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## 101.4.1 Buildings not previously occupied

- A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall be permitted to comply with the provisions of the laws in existence at the time of its original permit unless such permit has expired.
- Subsequent permits shall comply with the International Building Code or International Residential Code, as applicable, for new construction.

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## 101.4.2 Buildings previously occupied

- The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the International Fire Code, or the International Property Maintenance Code, or as is deemed necessary by the code official for the general safety and welfare of the occupants and the public.

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## Unsafe Buildings & Equipment 115

- Buildings, structures or equipment that are or hereafter become unsafe, shall be taken down, removed or made safe as the code official deems necessary and as provided for in this code.

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## Unsafe Definition

- Buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that constitute a fire hazard, or in which the structure or individual structural members meet the definition of "Dangerous," or that are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe.
- A vacant structure that is not secured against entry shall be deemed unsafe.

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## Definitions 202

- ADDITION. An extension or increase in floor area or height of a building or structure.

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## Definitions 202

- ALTERATION. Any construction or renovation to an existing structure other than a repair or addition.

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## Definitions 202 (2021)

- CHANGE OF OCCUPANCY.
- Where the current IBC requires a greater degree of safety, accessibility, structural strength, fire protection, MOE, or sanitation than the current building.
- Change of use:
- Change within the same classification for which there is a change in application of the code requirements

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## Definitions
## 202

- REPAIR. The reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

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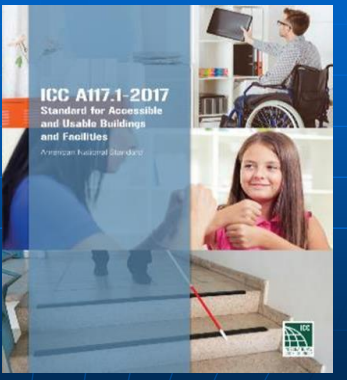
## Compliance Methods
## 301.1

- As selected by the applicant
- 302 through 309 apply regardless of compliance method
  - Prescriptive
    - Chapter 5 & IFC chapter 11
  - Work Area
    - Chapters 6 - 12
  - Performance
    - Chapter 13
  - Relocated Buildings
    - Chapter 14
  - Accessibility
    - 2017 A117.1

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## Compliance Methods
## 301.3

- The *alteration, change of occupancy or addition of all existing buildings shall comply* with one of the methods listed in Sections 301.3.1, 301.3.2 or 301.3.3 **as selected by the applicant**.

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## Compliance Methods
## 301.3

- Sections 301.3.1 through 301.3.3 shall not be applied in combination with each other.
  - Exception for alterations complying with laws in existence at the time the building was built if approved by the code official

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## Prescriptive compliance method 301.3.1

- *Alterations, additions and changes of occupancy complying* with Chapter 5 of this code in buildings complying with the *International Fire Code shall be considered in compliance* with the provisions of this code.




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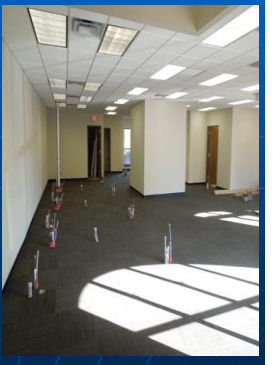
## Work area compliance method 301.3.2

- *Alterations, additions, changes in occupancy* complying with the applicable requirements of Chapters 6 through 12 of this code shall be considered in compliance with the provisions of this code.





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## Performance compliance method 301.1.3

- *Alterations, additions and changes in occupancy* complying with Chapter 13 of this code shall be considered in compliance with the provisions of this code.

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## Relocated buildings 301.4

- Relocated buildings shall comply with the requirements of Chapter 14

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## 302 General provisions (new NFPA reference in 2021)

- In existing I-2 occupancies, ambulatory health care facilities, outpatient clinics, and hyper baric facilities, alterations, repairs, changes of occupancies shall also comply with NFPA 99.

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## Storm Shelters New language in 2021

- Section applies to Storm shelters constructed within existing buildings.
- Must be constructed in accordance with ICC 500
- Additions to E occupancies require a storm shelter be added where the design wind speed for tornados is 250 MPH or more. Capacity shall include all buildings on the site.
- Exceptions for capacity and trigger to create a storm shelter

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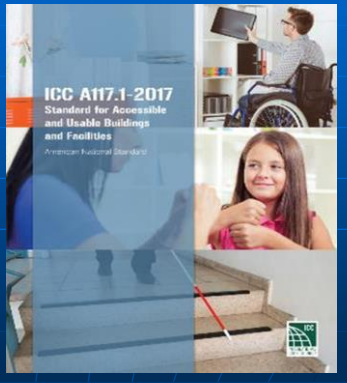
## Compliance with accessibility 306.2 (2021)

- Accessibility requirements for existing buildings shall comply with the 2017 edition of ICC/ANSI A117.1

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## Accessibility for Existing Buildings 306--2021

- Scope Applies to:
  - maintenance,
  - change of occupancy,
  - additions and
  - alterations to existing buildings
    - including those identified as historic buildings.

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## 306.3 Maintenance of facilities

- A facility that is constructed or altered to be accessible shall be maintained accessible during occupancy.

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## Accessibility

- Found in 306 for 2021.
- Section 306.2 now Includes a reference to existing buildings and alterations in 2017 ANSI. Many new requirements for Accessibility in existing buildings.

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## 306.4/305.3 Extent of application

- An alteration of an existing element, space or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction.

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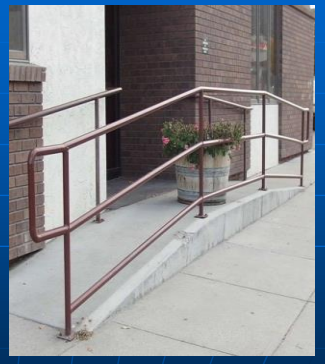
## 306.3.1 Extent of application

- Alterations shall not reduce or have the effect of reducing accessibility of a building, portion of a building or facility.



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## Section changed in 2021

- Existing buildings that undergo a change of group or occupancy shall comply with 306.7


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## 306.5 Exception
## Change of occupancy

- Exception: Type B dwelling units or sleeping units required by Section 1107 of the IBC are not required to be provided in existing buildings and facilities undergoing a change of occupancy in conjunction with alterations where the work area is 50 percent or less of the aggregate area of the building.

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## Partial Change of Occupancy
## 305.4.1

- Where a portion of the building is changed to a new occupancy classification…use:

305.6 – Alterations
305.7 – Alterations for primary function
305.8 – Alterations Scoping

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## Complete Change in Occupancy

- Complete Change in Occupancy
- Where an entire building undergoes a change of occupancy:
  - shall comply with Section 305.4.1 and shall have all of the following accessible features:

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## 305.4.2 Change of occupancy

1. Not fewer than one accessible building entrance.
2. Not fewer than one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1111 of the International Building Code.
4. Accessible parking, where parking is being provided.
5. Not fewer than one accessible passenger loading zone, when loading zones are provided.
6. Not fewer than one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

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## Change of occupancy 305.4.2

- Exception: The accessible features listed in Items 1 through 6 are not required for an accessible route to Type B units.

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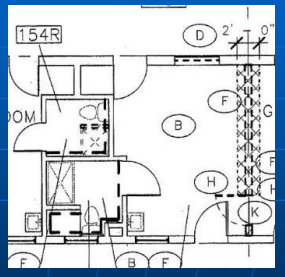
## 305.4.2 Change of occupancy

- Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible.

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## 306.5 Change of Occupancy

- Now references 306.7 Alterations
- A Change of occupancy is often an alteration therefore no need to duplicate the language

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## Definitions 202

- TECHNICALLY INFEASIBLE. An alteration of a building or a facility that has little likelihood of being accomplished because
  - the existing structural conditions require the removal or alteration of a load-bearing member that is an essential part of the structural frame,
  - or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

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## 305.5 306.6 Additions

- Provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, a primary function shall comply with the requirements in Section 305.7.
- 2021 references 306.7 Alterations

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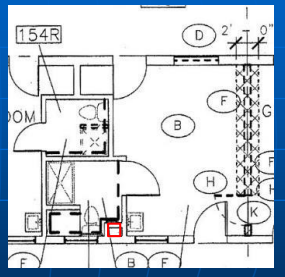
## 305.6 306.7 Alterations

- A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 of the IBC, unless technically infeasible.
- Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

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## 305.6 306.7.1 Alterations Exceptions

- 1. The altered element or space is not required to be on an accessible route, unless required by Section 305.7.

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## Alterations Exceptions

- 2. Accessible means of egress required by Chapter 10 of the IBC are not required to be provided in existing buildings and facilities.

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## Alterations Exceptions

- 3. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit.

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## Alterations Exceptions

- 4. Type B dwelling or sleeping units required by Section 1107 of the IBC are not required to be provided in existing buildings and facilities undergoing alterations where the work area is 50 percent or less of the aggregate area of the building.

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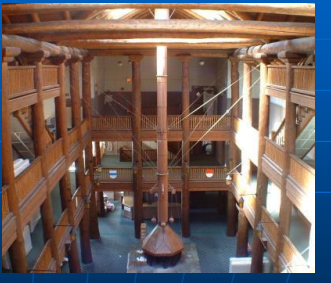
## 305.7 Alterations affecting an area containing a primary function

- Where an alteration affects:
  - Accessibility to a primary function
  - or contains an area of primary function
  - *Then the route to the primary function area shall be accessible.*



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## Primary Function Definition

- PRIMARY FUNCTION. A primary function is a major activity for which the facility is intended.
  - Examples of primary function:
    - customer service lobby of a bank,
    - dining area of a cafeteria,
    - meeting rooms in a conference center,
    - offices and other work areas in which the activities of the public accommodation or other private entity using the facility are carried out.

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## Primary Function Definition

- Examples of what is NOT primary function:
  - Mechanical rooms,
  - boiler rooms,
  - supply storage rooms,
  - employee lounges or locker rooms, janitorial closets,
  - entrances,
  - corridors,
  - restrooms

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## Alterations

- The accessible route to the primary function area shall include toilet facilities and drinking fountains serving the area of primary function.

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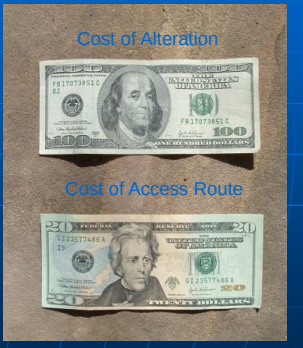
## Alterations Exceptions

- 1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.

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## Disproportion ADA

- Alterations cause accessible routes to be retrofit
- Costs shall not be disproportionate to the cost of the alteration




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## 20% Disproportion

- Accessible Route Features:
  - Ch. 4 – ICC/A117.1
  - Walking Surfaces
  - Doors & Doorways
  - Ramps & Curb Ramps
  - Elevators
  - Platform Lifts


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## Walking Surfaces

- 403.2 Floor Surface (see 302)
- 403.3 Slope
- 403.4 Changes in Level
- 403.5 Clear Width

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## ADA Technical Assistance Manual III-6.2000

- What is a "path of travel"?
- It also includes
  - phones,
  - restrooms,
  - drinking fountains
- …serving the altered area.

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## ADA Technical Assistance Manual III-6.2000

- What costs can be included in determining whether the 20 percent disproportionality limitation has been met?
- Widening doorways, installing ramps, making bathrooms accessible, lowering telephones, relocating water fountains -- as well as any other costs associated with making the path of travel accessible -- can be included.

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## How to spend the 20%...

- IBC is silent
- ADA Guidance:
- *First priority should be given to measures that will enable individuals with disabilities to "get in the front door," followed by measures to provide access to areas providing goods and services.*

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## How to spend the 20%...

- Changes should be made in the following order:
  - accessible entrance
  - accessible route to the altered area
  - at least one accessible restroom for each sex or single unisex restroom
  - phones
  - drinking fountains
  - and then other elements such as parking, storage, and alarms.

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## 305.7 Alterations Exceptions

- 2. This provision does not apply to alterations limited solely to
  - windows,
  - hardware,
  - operating controls,
  - electrical outlets &
  - signs.

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## 305.7 Alterations Exceptions

- 3. This provision does not apply to alterations limited solely to
  - mechanical systems,
  - electrical systems,
  - installation or alteration of fire protection systems &
  - abatement of hazardous materials

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## 305.7 Alterations Exceptions

- 4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

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## 305.7 – Alterations Affecting an Area Containing a Primary Function

- Exception 5
- "This provision does not apply to altered areas limited to Type B dwelling and sleeping units."

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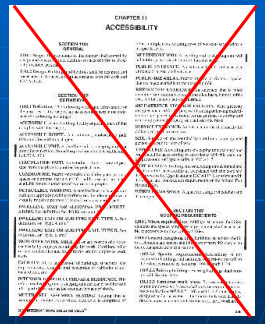
## 305.8/ 306.7Scoping for alterations

- The provisions of IBC Chapter 11 Sections 305.8.1/306.7.1 through 305.8.14/ 306.7.16 shall apply to alterations to existing buildings and facilities.

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## 305.8.1 306.7.5 Entrances

- Where an alteration includes alterations to an entrance that is not an accessible entrance, the altered entrance is not r

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## 305.8.1 Entrances

- Where an alteration includes alterations to an entrance that is not accessible,
- and the facility has an accessible entrance,
- the altered entrance is not required to be accessible, unless required by Section 305.7.
- Signs complying with Section 1111 of the IBC shall be provided.


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## 305.8.2 / 306.7.7 Elevators

- Altered elements of existing elevators shall comply with ASME A17.1 and ICC A117.1.
- Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

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## 305.8.3 / 306.7.8 Platform lifts

- Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

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## 305.8.4 / 306.7.9 Stairways and escalators in existing buildings.

- In alterations, change of occupancy or additions where an escalator or stairway is added where none existed previously and major structural modifications are necessary for installation, an accessible route shall be provided between the levels served by the escalator or stairways in accordance with Section 1104.4 of the IBC.

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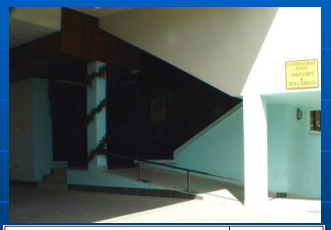
## 305.8.5 Ramps (2021)

- Where steeper slopes than allowed by Section 1012.2 of the IBC are necessitated by space limitations, the slope of ramps in or providing access to existing buildings or facilities shall comply with Table 305.8.5.



| SLOPE | MAXIMUM RISE |
|---|---|
| Steeper than 1:10 but not steeper than 1:8 | 3 inches |
| Steeper than 1:12 but not steeper than 1:10 | 6 inches |

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## 305.8.6 Dwelling or sleeping units

- Where I-1, I-2 , I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 of the IBC for Accessible units apply only to the quantity of spaces being altered or added.

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## 305.8.7 306.7.10 Type A dwelling or sleeping units

- Where more than 20 Group R-2 dwelling or sleeping units are being added, the requirements of Section 1107 of the IBC for Type A units apply only to the quantity of the spaces being added.

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## 305.8.8 306.7.10.3
## Type B dwelling or sleeping units

- Where more than 4 Group I-1, I-2,R-1,R-2, R-3, or R-4 dwelling or sleeping units are being added, the requirements of Section 1107 of the IBC for Type B units apply only to the quantity of the spaces being added.

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## 305.8.10 306.7.11 Toilet rooms

- Where it is technically infeasible to alter existing toilet and bathing facilities to be accessible, an accessible single user or one family or assisted use toilet constructed in accordance with 1109.2.1 of the IBC is permitted.
- The family or assisted use facility shall be located on the same floor and in the same area as the existing facilities.
- Directional signage required.
- Added similar language for bathing rooms in 306.7.12

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## Additional toilet and bathing fixtures – 305.8.11

- In assembly and mercantile occupancies, where additional toilet fixtures are added, not fewer than one accessible family or assisted-use toilet room shall be provided where required by Section 1109.2.1 of the IBC. (6 or more)
- In recreational facilities, where additional bathing rooms are being added, not fewer than one family or assisted-use bathing rooms shall be provided where required by Section 1109.2.1 of the IBC.

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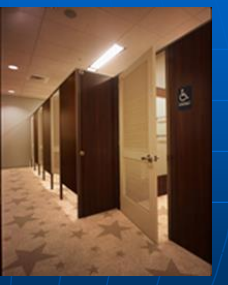
## 305.8.12 Dressing, fitting and locker rooms

- Where it is technically infeasible to provide accessible dressing, fitting or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided.
- Where separate-sex facilities are provided, accessible rooms for each sex shall be provided.
- Separate-sex facilities are not required where only unisex rooms are provided.



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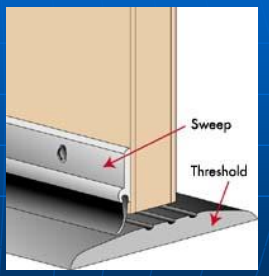
## ~~305.8.14~~ ~~Thresholds~~ (2021) Now in ANSI only

- ~~The maximum height of thresholds at doorways shall be ¾ inch.~~
- ~~Such thresholds shall have beveled edges on each side.~~

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## 305.8.15 Amusement rides

- Where the structural or operational characteristics of an amusement ride are altered to the extent that the amusement ride's performance differs from that specified by the manufacturer or the original design, the amusement ride shall comply with requirements for new construction in Section 1110.4.8 of the IBC.

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## 305.9 306.7.16 Historic buildings

- Where compliance with the requirements for accessible routes, entrances or toilet rooms would threaten or destroy the historical significance as det. By the AHJ, the alternative provisions of 306.7.16.1 thru 306.7.16.5 for that element shall be allowed.
- 2 exceptions

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## 305.9 Historic buildings

- Where compliance with the requirements for accessible routes, ramps, entrances or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the authority having jurisdiction, the alternative requirements of Sections 305.9.1 through 305.9.4 for that element shall be permitted.

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## 305.9.1 306.7.16.1 Site arrival points

- Not fewer than one accessible route including curb ramps from a site arrival point to an accessible entrance shall be provided.

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## 305.9.2 Multilevel buildings and facilities

- An accessible route from an accessible entrance to public spaces on the level of the accessible entrance shall be provided.

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## 305.9.3 Entrances

- Not fewer than one main entrance shall be accessible.

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## 305.9.3 Entrances Exceptions

- If a public entrance cannot be made accessible, an accessible nonpublic entrance that is unlocked while the building is occupied shall be provided; or

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## 305.9.3 Entrances Exceptions

- a locked accessible entrance with a notification system or remote monitoring shall be provided.


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## 305.9.3 Entrances

- Signs complying with Section 1111 of the IBC shall be provided at the public entrance and the accessible entrance.


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## 306.7.16.4 Toilet and bathing facilities

- Where toilet rooms are provided, not fewer than one accessible single user toilet room or one accessible family or assisted use toilet room complying with Section 1110.2.1 of the IBC shall be provided.

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## End of Day One

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## 309

- Additions and Replacements of Exterior wall coverings and Exterior Wall envelopes
- New requirements in 2021
- 2 or more contiguous stories & comprises more than 15% of the total wall area on any side of the building.

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## Repairs 401.1
## New language in 2021

- Repairs shall comply with Chapter 4
- Repairs to historic buildings need only comply with chapter 12.
- Repairs shall be done in a manner to maintain the existing level of protection in the MOE and Fire protection

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## Glass Replacement
## 402

- Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the IBC or the IRC as applicable.

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## Repairs
## 403, 404

- Must maintain level of fire protection provided
- Must maintain level of protection for the means of egress

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## Electrical Repair 406

- Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material.
  - Receptacles
  - Plug fuses
  - Nongrounding-type receptacles
  - Group I-2 receptacles
  - Grounding of appliances

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## Mechanical Repairs 407

- Existing mechanical systems undergoing repair shall not make the building less conforming than it was before the repair was undertaken.

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## Plumbing 408

- Plumbing materials and supplies shall not be used for repairs that are prohibited in the International Plumbing Code .
  - Water closets – Federal mandate restricts water closets to 1.6 gallons per flush
  - Blowout design fixtures are exempt from this requirment

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## 406.1.4

- New Electrical repair reference to NFPA 99 requirements for I-2, ambulatory facilities and outpatient clinics

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## Prescriptive Compliance Method Chapter 5

- The provisions of this chapter shall control the alteration, addition and change of occupancy or relocation of existing buildings and structures, including historic buildings and structures as referenced in Section 301.3.1.
- 2021 Removed exception
  - ~~Exception: Existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.~~

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## 501.2 2018 change Fire-resistance ratings

- Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the IBC has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code.
- The building is required to meet the other applicable requirements of the IBC.

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## Additions 502.1

- Additions to any building or structure shall comply with the requirements of the IBC for new construction.
- Alterations to the existing building or structure shall be made to ensure that the existing building or structure together with the addition are no less conforming with the provisions of this code than the existing building or structure was prior to the addition .
- An existing building together with its additions shall comply with the height and area provisions of Chapter 5 of the IBC.

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## ~~Smoke alarms in existing portions of a building - 502.5~~

- ~~Where an addition is made to a building or structure of a~~ Group ~~R or I-1 occupancy, the existing building shall be provided~~ with ~~smoke alarms in accordance with Section 1103.8 of the International Fire Code.~~

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## ~~Carbon monoxide alarms~~ ~~502.7~~

- ~~Where an *addition is made to a building or structure of a* Group I-1, I-2 I-4 or R occupancy, the *existing building shall be provided* with carbon monoxide alarms in accordance with Section 1103.9 of the *IFC or Section R316 of the IRC.*~~

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## Additions to Group E
## 502.8 Gone in 2021

- For additions to Group E occupancies, storm shelters shall be provided in accordance with Section 1106.1

 98

98

## Alterations
## 503.1

- Except as provided by Sections 302.4, 302.5 or this section, alterations to any building or structure shall comply with the requirements of the code for new construction.
- Alterations shall be such that the existing building or structure is no less complying with the provisions of this code than the existing building or structure was prior to the alteration .

- Exceptions:

1. An existing stairway shall not be required to comply with the requirements of Section 1009 of the IBC where the existing space and construction does not allow a reduction in pitch or slope.
2. Handrails otherwise required to comply with Section 1009.12 of the IBC shall not be required to comply with the requirements of Section 1012.6 of the IBC regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.
3. Where provided in below-grade transportation stations, existing escalators shall have a clear width of less than 32 inches.

 99

99

## 2021 change 503.4

- Load carrying information changed and exceptions for lateral load carrying structural elements.
- added exception #2: demand capacity ratio increase due to addition of rooftop supported mechanical equipment

 100

100

## Fire Escapes
## 504

- Fire escapes shall be permitted only as provided for in Sections 504.1.1 through 504.1.4
  - Not permitted in new buildings
  - Permitted in existing buildings where exterior stairways cannot be utilized.

 101

101

## Replacement Windows
## 505.1 & .2

- The installation or replacement of glass shall be as required for new installations.
- Window opening control devices required on replacement windows.

 102

102

## Change of Occupancy
## 506.1

- A change of occupancy shall not be made in any building unless that building is made to comply with the requirements of the IBC.
- Changes in use or occupancy in a building or portion thereof shall be such that the existing building is no less complying with the provisions of this code than the existing building or structure was prior to the change.


 103

103

103

## Change of Occupancy
## 506.1

- Subject to the approval of the building official, changes of occupancy shall be permitted without complying with all of the requirements of this code for the new occupancy, provided that the new occupancy is less hazardous, based on life and fire risk, than the existing occupancy.

 104

104

## "Less Hazardous"

- Determination by reduction in hazard classification
- Example:
  - From F-1 to F-2
  - From S-1 to S-2
- Height & area tables in IBC
- Work area hazard categories

 105

105

## Change in the character of use 506.1.1

- A change in occupancy with no change of occupancy classification shall not be made to any structure that will subject the structure to any special provisions of the applicable *International Codes*, without approval of the *code official*.
- Compliance shall be only as necessary to meet the specific provisions and is not intended to require the entire building be brought into compliance.

 106

106

## Certificate of occupancy 506.2

- A certificate of occupancy shall be issued where it has been determined that the requirements for the new occupancy classification have been met.

Town of Your town
CERTIFICATE OF OCCUPANCY

Number: 123431
Date of Issue: 6/2/53
Address: 123 Main Street
For: One family home

Basement: Unfinished
First Floor: Living room, Dining room, Kitchen, Hall
Second Floor: Three bedrooms, Bathroom, Hall
Third Floor: None
Attic: Unfinished

Authorized by: Luke Kareffey

 107

107

## Stairways 506.3

- Existing stairways in an existing structure shall not be required to comply with the requirements of a new stairway as outlined in Section 1011 of the IBC where the existing space and construction will not allow a reduction in pitch or slope.

 108

108

## Historic Buildings
## Section 507.1

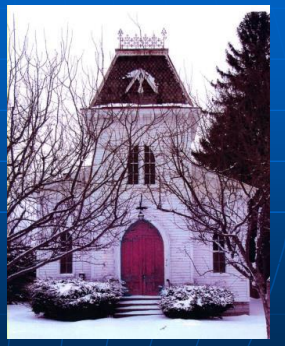
- The provisions of this code that require improvements relative to a building's existing condition or, in the case of repairs, that require improvements relative to a building's predamage condition, shall not be mandatory for historic buildings unless specifically required by this section.

 109

109

## Definition
## 202

- Historic Buildings
  - buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law



 110

110

## 507.2
## Life safety hazards

- The provisions of this code shall apply to historic buildings judged by the building official to constitute a distinct life safety hazard.

 111

111

## Classification of Work
## Chapter 6

- Repair
- Alteration
  - Level 1
  - Level 2
  - Level 3
- Change of Occupancy
- Additions
- Historic Building
- ~~Relocated Building~~

 112

112

## Work area 601.2

- The work area, as defined in Chapter 2, shall be identified on the construction documents.
- WORK AREA.
  - That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.

 113

113

## Alterations – Level 1 Chapter 7

- Level 1 alterations include removal, replacement or covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve same purpose

 114

114

114

## Alt. Level 1 Conformance 701.2

- An existing building or portion thereof shall not be altered such that the building becomes less safe than its existing condition.
  - Exception: Where the current level of safety or sanitation is proposed to be reduced, the portion altered shall conform to the requirements of the IBC.

 115

115

## Emergency escape and rescue openings – 701.4

- Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.
- Bars, grilles, grates or similar devices are permitted to be placed over emergency escape and rescue openings provided that the minimum net clear opening size complies with the code that was in effect at the time of construction and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.

 116

116

## Emergency escape and rescue openings – 701.4

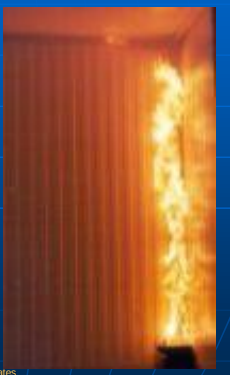
- Where such bars, grilles, grates or similar devices are installed, they shall not reduce the net clear opening of the emergency escape and rescue openings.
- Smoke alarms shall be installed in accordance with Section 907.2.11 of the *IBC* regardless of the valuation of the alteration.

 117

117

## Alt. Level 1 Building Elements/Materials 702

- All newly installed interior finishes to comply with flame spread requirements of IBC
- New carpeting used as interior floor finish material to comply with radiant flux requirements of IBC
- Newly installed interior trim materials must comply with IBC



 118

118

## Alt. Level 1 Building Elements/Materials 702

- Window opening control devices on replacement windows
- Replacement window emergency escape and rescue openings

 119

119

## Materials and methods 702.7

- All new work shall comply with the materials and methods requirements in the IBC, IECC, IMC, and IPC, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

 120

120

## International Fuel Gas Code 702.7.1

- The following sections of the IFGC shall constitute the fuel gas materials and methods requirements for Level 1 alterations.
- All of Chapter 3, entitled "General Regulations," except Sections 303.7 and 306.
- All of Chapter 4, entitled "Gas Piping Installations," except Sections 401.8 and 402.3.
  - 401.8 & 402.3 conditions
- All of Chapter 5, entitled "Chimneys and Vents."
- All of Chapter 6, entitled "Specific Appliances."

 121

121

## Fire Protection 703

- Alterations shall be done in a manner that maintains the level of fire protection provided.


 122

122

## Means of Egress 704

- Alterations shall be done in a manner that maintains the level of protection provided for the means of egress.

 123

123

## Reroofing 705

- Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the IBC.
  - Exceptions:
  - 1. Roof replacement or roof recover of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal) in Section 1507 of the IBC for roofs that provide positive roof drainage.

 124

124

## Reroofing
## 705

- 2. Re-covering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 of the IBC for roofs that provide for positive roof drainage.
- For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4 of the IBC.

 125

125

## 706.2
## Structural and construction loads

- Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

 126

126

## Roof replacement
## 705.2

- Roof replacement shall include the removal of all existing layers of roof coverings down to the roof deck.
  - Exception: Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507 of the IBC.

 127

127

## Roof recover
## 705.2.1

- The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:
  - 1. The new roof covering is installed in accordance with the roof covering manufacturer's approved instructions.
  - 2. Complete and separate roofing systems, such as standing-seam metal roof panel systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, are installed.

 128

128

## Roof recover
## 705.2.1

- 3. Metal panel, metal shingle and concrete and clay tile roof coverings are installed over existing wood shake roofs in accordance with Section 706.4.
- 4. A new protective roof coating is applied over an existing protective roof coating, a metal roof panel, metal roof shingles, mineral surfaced roll roofing, a built-up roof, modified bitumen roofing, thermoset and thermoplastic single-ply roofing or a spray poly- urethane foam roofing system.

 129

129

## Exceptions
## 705.2.1.1

- A roof recover shall not be permitted where any of the following conditions occur:
  - 1. The existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
  - 2. The existing roof covering is slate, clay, cement or asbestos-cement tile.
  - 3. The existing roof has two or more applications of any type of roof covering.

 130

130

## Roof re-covering
## 705.3

- Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

 131

131

## Reinstallation of materials
## 705.5

- Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled.
- Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated.
- Aggregate surfacing materials shall not be reinstalled.

 132

132

## Flashings
## 705.6

- Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions.
- Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

 133

133

## 707 electrical

- New requirements for Health care facilities.
- Must meet NFPA 99

 134

134

## Energy Conservation
## 708

- Level 1 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the IECC or IRC.
- The alterations shall conform to the energy requirements of the IECC or IRC as they relate to new construction only.

 135

135

## Alterations – Level 2
## 801

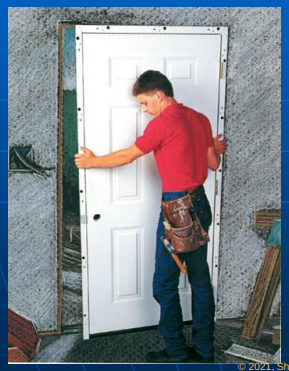
- Level 2 alterations include reconfiguration of space, addition or elimination of any door or window, reconfiguration or extension of any system, or installation of any additional equipment

 136

136

136

## Alterations – Level 2
## 801



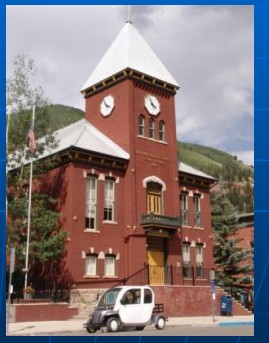
- In addition to requirements of Chapter 7, all work to comply with Level 1 provisions
- New construction elements, components, systems, and spaces to comply with IBC

 137

137

## Alterations – Level 2
## 801.4 - Exceptions

1. Where windows are added they are not required to comply with the light and ventilation requirements of the IBC.
2. Newly installed electrical equipment shall comply with the requirements of NEC.
3. The length of dead-end corridors in newly constructed spaces shall only be required to comply with the provisions of Section 805.6.



 138

138

## Alterations – Level 2
## 801.4 - Exceptions

4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet.
5. Where provided in below-grade transportation stations, existing and new escalators shall be permitted to have a clear width of less than 32 inches.
6. New structural members and connections shall be permitted to comply with alternative design criteria in accordance with Section 302.

 139

139

## Existing vertical openings
## 802.2.1

- Existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire-resistance rating of not less than 1 hour with approved opening protectives.
- 14 Exceptions!

 140

140

## Supplemental shaft and floor opening enclosure requirements - 802.2.2

- Where the work area on any floor exceeds 50 percent of that floor area, the enclosure requirements of Section 802.2 shall apply to vertical openings other than stairways throughout the floor.
  - Exception: Vertical openings located in tenant spaces that are entirely outside the work area.

 141

141

## Supplemental stairway enclosure requirements - 802.2.3

- Where the work area on any floor exceeds 50 percent of that floor area, stairways that are part of the means of egress serving the work area shall, at a minimum, be enclosed with smoke-tight construction on the highest work area floor and all floors below.
  - Exception: Where stairway enclosure is not required by the IBC or the International Fire Code.

 142

142

## Smoke compartments 802.3

- In Group I-2 occupancies where the work area is on a story used for sleeping rooms for more than 30 patients, the story shall be divided into not less than two compartments by smoke barrier walls in accordance with Section 407.5 of the IBC as required for new construction.


 143

143

## Interior finish 802.4

- The interior finish of walls and ceilings in exits and corridors in any work area shall comply with the requirements of the IBC.
  - Exception: Existing interior finish materials that do not comply with the interior finish requirements of the IBC shall be permitted to be treated with an approved fire-retardant coating in accordance with the manufacturer's instructions to achieve the required rating.
  - Compliance must be demonstrated

 144

144

## Supplemental interior finish requirements - 802.4.1

- Where the work area on any floor exceeds 50 percent of the floor area, Section 703.4 shall also apply to the interior finish in exits and corridors serving the work area throughout the floor.
  - Exception: Interior finish within tenant spaces that are entirely outside the work area.

 145

145

## Guards 802.5

- The requirements of Sections 803.5.1 and 803.5.2 shall apply in all work areas.
  - Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.
  - Where there are no guards or where existing guards must be replaced, the guards shall be designed and installed in accordance with the IBC.

 146

146

## 802.6 Fire-resistance ratings

- Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the IBC has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code.
- The building is required to meet the other applicable requirements of the IBC.

 147

147

## Fire Protection 803

- Requirements limited to work areas in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located or otherwise beyond the work area.
  - Automatic Fire Sprinklers
  - Standpipes
  - Fire Alarm and Detection

 148

148

## Corridor ratings 803.1.1

- Where an approved automatic sprinkler system is installed throughout the story, the required fire-resistance rating for any corridor located on the story shall be permitted to be reduced in accordance with the International Building Code. In order to be considered for a corridor rating reduction, such system shall provide coverage for the stairwell landings serving the floor and the intermediate landings immediately below.

 149

149

## Fire Sprinklers – High Rise 803.2.1

- Work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection in the entire work area where the work area is located on a floor that has a sufficient sprinkler water supply system from an existing standpipe or a sprinkler riser serving that floor.

 150

150

## Fire Sprinklers – High Rise 803.2.1.1

- Where the work area on any floor exceeds 50 percent of that floor area, Section 704.2.1 shall apply to the entire floor on which the work area is located.
  - Exception: Occupied tenant spaces that are entirely outside the work area.

 151

151

## Fire Sprinklers - Groups A, B, E, F-1, H, I-1, I-3, I-4, M, R-1, R-2, R-4, S-1 and S-2 803.2.2

- work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where both of the following conditions occur:
  1. The work area is required to be provided with automatic sprinkler protection in accordance with the IBC as applicable to new construction;
  2. The work area exceeds 50 percent of the floor area

  Exceptions
  - The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump.

 152

152

## Mixed uses 803.2.2.1

- In work areas containing mixed uses, one or more of which requires automatic sprinkler protection in accordance with Section 704.2.2, such protection shall not be required throughout the work area provided that the uses requiring such protection are separated from those not requiring protection by fire-resistance-rated construction having a minimum 2-hour rating for Group H and a minimum 1-hour rating for all other occupancy groups.

 153

153

## Windowless stories 803.2.4

- Work located in a windowless story, as determined in accordance with the International Building Code , shall be sprinklered where the work area is required to be sprinklered under the provisions of the International Building Code for newly constructed buildings and the building has a sufficient municipal water supply without installation of a new fire pump.

 154

154

## Standpipes 803.3

- Where the work area includes exits or corridors shared by more than one tenant and is located more than 50 feet above or below the lowest level of fire department access, a standpipe system shall be provided.
- Standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access.
- Standpipe systems shall be installed in accordance with the IBC.

- Exceptions:

1. No pump shall be required provided that the standpipes are capable of accepting delivery by fire department apparatus of a minimum of 250 gpm at 65 psi to the topmost floor in buildings equipped throughout with an automatic sprinkler system or a minimum of 500 gpm at 65 psi to the topmost floor in all other buildings. Where the standpipe terminates below the topmost floor, the standpipe shall be designed to meet gpm/psi requirements of this exception for possible future extension of the standpipe.
2. The interconnection of multiple standpipe risers shall not be required.

 155

155

## Supplemental fire alarm system requirements - 803.4.2

- Where the work area on any floor exceeds 50 percent of that floor area, Section 803.4.1 shall apply throughout the floor.
  - Exception: Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the work area.

 156

156

## Smoke alarms 803.4.3

- . Individual sleeping units and individual dwelling units in any work area in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with the IFC.
  - Exception: Interconnection of smoke alarms outside of the work area shall not be required.

 157

157

## Carbon monoxide alarms 804.1

- Any work area in Group I- 1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide alarms in accordance with Section 1103.9 of the IFC.
  - Exceptions:
  - 1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.
  - 2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.

 158

158

## Means of Egress 804

- Means of egress shall comply except:
  1. Where the work area and the means of egress serving it complies with NFPA 101.
  2. Means of egress complying with the requirements of the building code under which the building was constructed shall be considered compliant means of egress if, in the opinion of the code official, they do not constitute a distinct hazard to life.

 159

159

## Minimum number of exits 804.4.1

- Every story utilized for human occupancy on which there is a work area that includes exits or corridors shared by more than one tenant within the work area shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the IBC. In addition, the exits shall comply with Sections 805.3.1.1 and 805.3.1.2.
  - Single-exit building
  - Fire escapes

 160

160

## Mezzanines
## 804.4.2

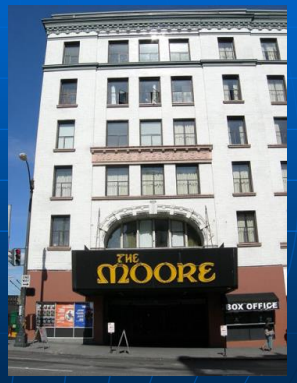
- Mezzanines in the work area and with an occupant load of more than 50 or in which the travel distance to an exit exceeds 75 feet shall have access to not fewer than two independent means of egress.
  - Exception: Two independent means of egress are not required where the travel distance to an exit does not exceed 100 feet and the building is protected throughout with an automatic sprinkler system.

 161

161

## Main entrance—Group A
## 804.4.3

- All buildings of Group A with an occupant load of 300 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity of not fewer than one half of the total occupant load.
- The remaining exits shall be capable of providing one half of the total required exit capacity.
  - Exception: Where main exit is not well defined or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width.




 162

162

## Two Egress Doorways Required
## 804.5.1

- Occupant load and travel distance.
  - In any work area, all rooms and spaces having an occupant load greater than 50 or in which the travel distance to an exit exceeds 75 feet shall have not fewer than two egress doorways.
  - Exceptions:
    1. Storage rooms having a maximum occupant load of 10.
    2. Where the work area is served by a single exit in accordance with Section 705.3.1.1.
- Group I-2.
  - In buildings of Group I-2 occupancy, any patient sleeping room or suite of patient rooms greater than 1,000 square feet within the work area shall have not fewer than two egress doorways.

 163

163

## Door swing
## 805.2

- In the work area and in the egress path from any work area to the exit discharge, all egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel.
- Where the work area exceeds 50 percent of the floor area, door swing shall comply with Section 805.4.2 throughout the floor.
  - Exception: Means of egress within or serving only a tenant space that is entirely outside the work area.

 164

164

## Door closing
## 804.5.3

- In any work area, all doors opening onto an exit passageway at grade or an exit stair shall be self-closing or automatically closing by listed closing devices.
  Exceptions:
  1. Where exit enclosure is not required by the IBC.
  2. Means of egress within or serving only a tenant space that is entirely outside the work area.
- Where the work area exceeds 50 percent of the floor area, doors shall comply with Section 705.4.3 throughout the exit stair from the work area to the level of exit discharge.

 165

165

## Panic hardware
## 804.5.4

- In any work area, and in the egress path from any work area to the exit discharge, in buildings or portions thereof of Group A assembly occupancies with an occupant load greater than 100, all required exit doors equipped with latching devices shall be equipped with approved panic hardware in accordance with IBC 1010.2.9

- Where the work area exceeds 50 percent of the floor area, panic hardware shall comply with Section 805.4.4 throughout the floor.
  - Exception: Means of egress within a tenant space that is entirely outside the work area.

 166

166

## Corridor doors
## 804.6.1

- Corridor doors in the work area shall not be constructed of hollow core wood and shall not contain louvers.
- Dwelling unit or sleeping unit corridor doors in work areas in buildings of Groups R-1, R-2, and I-1 shall not less than 1 3/8-inch solid core wood or approved equivalent and shall not have any glass panels, other than approved wired glass or other approved glazing material in metal frames.
- All dwelling unit or sleeping unit corridor doors in work areas in buildings of Groups R-1, R-2, and I-1 shall be equipped with approved door closers. All replacement doors shall be 1¾-inch solid bonded wood core or approved equivalent, unless the existing frame will accommodate only a 13/8-inch door.
- Exceptions:
  1. Corridor doors within a dwelling unit or sleeping unit.
  2. Existing doors meeting the requirements of HUD Guideline on Fire Ratings of Archaic Materials and Assemblies (IEBC Resource A) for a rating of 15 minutes or more shall be accepted as meeting the provisions of this requirement.
  3. Existing doors in buildings protected throughout with an approved automatic sprinkler system shall be required only to resist smoke, be reasonably tight fitting, and shall not contain louvers.
  4. In group homes with not more than 15 occupants and that are protected with an approved automatic detection system, closing devices are not required.
  5. Door assemblies having a fire-protection rating of not less than 20 minutes.

 167

167

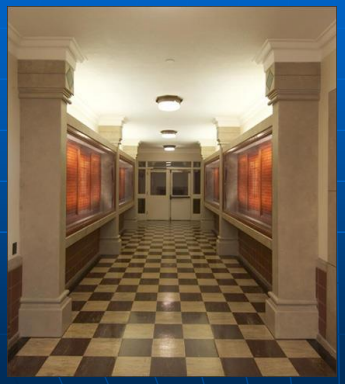
## Transoms
## 804.6.2

- In all buildings of Group I-1, R-1, and R-2 occupancy, all transoms in corridor walls in work areas shall either be glazed with ¼-inch wired glass set in metal frames or other glazing assemblies having a fire-protection rating as required for the door and permanently secured in the closed position or sealed with materials consistent with the corridor construction.

 168

168

## Other corridor openings 804.6.3



- In any work area, any other sash, grille, or opening in a corridor and any window in a corridor not opening to the outside air shall be sealed with materials consistent with the corridor construction.
- Where the work area exceeds 50 percent of the floor area, Section 805.5.3 shall be applicable to all corridor windows, grills, sashes, and other openings on the floor.
  - Exception: Means of egress within or serving only a tenant space that is entirely outside the work area.

 169

169

## Dead-end corridors 804.7

- Dead-end corridors in any work area shall not exceed 35 feet .
  - Exceptions:
  1. Where dead-end corridors of greater length are permitted by the IBC.
  2. In other than Group A, I-2 and H occupancies, the maximum length of an existing dead-end corridor shall be 50 feet in buildings equipped throughout with an automatic fire alarm system installed in accordance with the IBC.
  3. In other than Group A, I-2 and H occupancies, the maximum length of an existing dead-end corridor shall be 70 feet in buildings equipped throughout with an automatic sprinkler system installed in accordance with the IBC.
  4. In other than Group A, I-2 and H occupancies, the maximum length of an existing, newly constructed, or extended dead-end corridor shall not exceed 50 feet on floors equipped with an automatic sprinkler system installed in accordance with the IBC.

 170

170

## Means-of-egress lighting 804.8

- Means of egress in all work areas shall be provided with artificial lighting in accordance with the requirements of the IBC.
- Where the work area on any floor exceeds 50 percent of that floor area, means of egress throughout the floor shall comply with Section 804.8.1.
  - Exception: Means of egress within or serving only a tenant space that is entirely outside the work area.

 171

171

## Exit Signs 804.9


- Means of egress in all work areas shall be provided with exit signs in accordance with the requirements of the IBC.
- Where the work area on any floor exceeds 50 percent of that floor area, means of egress throughout the floor shall comply with Section 804.9.1.
  - Exception: Means of egress within a tenant space that is entirely outside the work area.

 172

172

## Handrails
## 804.10

- Every required exit stairway that is part of the means of egress for any work area and that has three or more risers and is not provided with not fewer than one handrail, or in which the existing handrails are judged to be in danger of collapsing, shall be provided with handrails for the full length of the run of steps on not fewer than one side.
- All exit stairways with a required egress width of more than 66 inches shall have handrails on both sides.
- Handrails shall be designed and installed in accordance with the provisions of the IBC.

 173

173

## Guards
## 804.12

- The requirements of Sections 804.12.1 and 804.12.2 shall apply to guards from the work area floor to, and including, the level of exit discharge but shall be confined to the egress path of any work area.
- Every open portion of a stairway, landing, or balcony that is more than 30 inches above the floor or grade below and is not provided with guards, or those portions in which existing guards are judged to be in danger of collapsing, shall be provided with guards.
- Guards required in accordance with Section 804.12.1 shall be designed and installed in accordance with the IBC.

 174

174

## Structural
## 805

- Structural elements and systems within buildings undergoing Level 2 alterations shall comply with this section.

 175

175

## Electrical
## 806

- All newly installed electrical equipment and wiring relating to work done in any work area shall comply with all applicable requirements of NFPA 70 except as provided for in Section 806.3.

 176

176

## Existing installations 806.2

- Existing wiring in all work areas in Group A-1, A-2, A-5, H, and I occupancies shall be upgraded to meet the materials and methods requirements of Chapter 7.

 177

177

## Residential occupancies 806.4

- In Group R-2, R-3, and R-4 occupancies and buildings regulated by the International Residential Code , the requirements of Sections 807.3.1 through 807.3.7 shall be applicable only to work areas located within a dwelling unit.

- Enclosed Areas
- Kitchens
- Laundry Areas
- GFCI
- Minimum lighting outlets
- Utility rooms and basements
- Clearance for equipment

 178

178

## Reconfigured or converted spaces 807.1

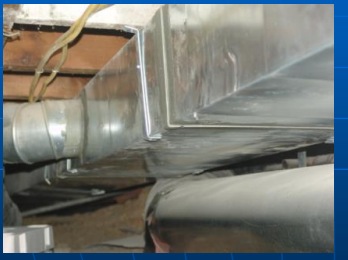
- Reconfigured spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area shall be provided with natural or mechanical ventilation in accordance with the IMC.

Exception: Existing mechanical ventilation systems shall comply with the requirements of Section 807.2.

 179

179

## Altered existing systems 807.2



- In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured, or extended shall provide not less than 5 cfm per person of outdoor air and not less than 15 cfm of ventilation air per person; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62.1

 180

180

## ~~Minimum Plumbing Fixtures 809.1~~

- ~~Where the occupant load of the story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the IPC based on the increased occupant load.~~

 181

181

## Energy Conservation 809

- Level 2 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the IECC or IRC. The alterations shall conform to the energy requirements of the IECC or IRC as they relate to new construction only.

 182

182

## Alterations – Level 3 Chapter 9

- Level 3 alterations applicable where work area exceeds 50 percent of aggregate area of building

 183

183

183

## Compliance 901.2

- In addition to the provisions of this chapter, work shall comply with all of the requirements of Chapters 7 and 8.
- The requirements of Sections 802 (Building Elements), 803 (Fire Protection), and 804 (Means of Egress) and 805 (Structural shall apply within all work areas whether or not they include exits and corridors shared by more than one tenant and regardless of the occupant load.
  - Exception: Buildings in which the reconfiguration of space affecting exits or shared egress access is exclusively the result of compliance with the accessibility requirements of Section 705.2 shall not be required to comply with this chapter.

 184

184

## High-rise buildings 902.1

No changes in 903 from 2018 to 2021 except classroom acoustics

- Smoke & heat detection devices required in recirculating air or exhaust systems.
- Elevators >25' travel distance provided with emergency operation in accordance with ASME A17.3.
- Boiler/furnace room separation required from some uses.
- Emergency Controls required in some uses.

185

## Existing shafts and vertical openings 903.1

- Existing stairways that are part of the means of egress shall be enclosed in accordance with Section 803.2.1 between the highest work area floor and the level of exit discharge and all floors below.

186

## Interior finish 903.3


- Interior finish in exits serving the work area shall comply with Section 803.4 between the highest floor on which there is a work area to the floor of exit discharge.

187

## Automatic sprinkler systems 904.1

- Automatic sprinkler systems shall be provided in all work areas when required by Section 803.2 or this section.
  - High-rise buildings.904.1.1
  - Rubbish and linen chutes. 904.1.2
  - Upholstered furniture or mattresses 904.1.3
  - Changes to 904.1.4 thru 904.1.6

188

## Fire alarm and detection systems 904.2


- Fire alarm and detection shall be provided in accordance with Section 907 of the International Building Code as required for new construction.
  - Manual Fire Alarms
  - Automatic Fire Detection

 189

189

## Means of Egress 905

- Shall comply with the requirements of Section 805 except as specifically required below.
- Means of egress from the highest work area floor to the floor of exit discharge shall be provided with artificial lighting within the exit enclosure in accordance with the requirements of the IBC.
- Means of egress from the highest work area floor to the floor of exit discharge shall be provided with exit signs in accordance with the requirements of the IBC.
- 905.4 requires two-way communication systems in buildings with elevator service in accordance with 1009.8

 190

190

## Structural 906

- Where buildings are undergoing Level 3 alterations including structural alterations, the provisions of this section shall apply.
- New structural elements shall comply with Section 807.2.
- Existing structural elements carrying gravity loads shall comply with Section 807.4.

 191

191

## Energy Conservation 907.1

- Level 3 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the IECC or IRC.
- The alterations shall conform to the energy requirements of the IECC or IRC as they relate to new construction only.

 192

192

# End of Day two

 193

193

## Change of Occupancy
## Chapter 10

- Where the occupancy classification of a building changes, the provisions of Section 1002 through 1011 shall apply. This includes a change of occupancy classification and a change to another group within an occupancy classification.


 194

194

**A] CHANGE OF OCCUPANCY.** ~~A change in the use of a building or a portion of a building that results in any of the following~~Either of the following shall be considered as a change of occupancy where he International Building Code requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.
2. Any change in the purpose of, or a change in the level of activity within, a building or structure.
1. ~~A change of occupancy classification.~~
2. ~~A change from one group to another group within an occupancy classification.~~
3. ~~Any change in use within a group for which there is a change in the application of the requirements of this code.~~

**!018 International Residential Code**

**RB] CHANGE OF OCCUPANCY.** A change in the use of a building or portion of a building that involves a change in the application of the requirements of this code.

**Reason:** The proposed change keeps the language add to the 2018 code regarding change of occupancy classification and change of occupancy within the same classification. By adding the "greater degree" it ensures that businesses are not made to "retro-fit" existing tenant spaces that do not present a risk to the welfare or life safety of the tenants. Any renovations would still need to meet the requirements for alterations of the Existing Building Code.

For example, if a nail salon is change to an office space (assuming the same occupant load), why should the office be required to provide additional electrical outlets (section 1007.4) or new lighting (section 1010.1). There was already a tenant in the space with those conditions. Any life safety issues (such as a need for increased exits or sprinklers) are caught by the "greater degree" language.

The purpose of the Existing Building code should be to allow existing buildings to be renovated and occupied while maintaining the level of safety. It should not be to retrofit the tenant space or building to meet today's code.

**Cost impact:** The code change proposal will decrease the cost of construction

This should reduce the cost for business owners/tenants by only applying the change of occupancy requirements of the Existing

Building Code if the International Building Code requires a greater degree of any one of the six elements listed.

 195

195

## Change of Occupancy
## Chapter 10

- Various levels of change of occupancy addressed:
  - Repair or alteration work where change of occupancy does not involve classification change per IBC
  - Partial change of occupancy where portion of existing building changed to new occupancy
  - Certificate of occupancy issued where change of occupancy occurs resulting in different classification


 196

196

## 1001.2.1
## Change of use

- Any work undertaken in connection with a change in use that does not involve a change of occupancy classification or a change to another group within an occupancy classification shall conform to the applicable requirements for the work as classified in Chapter 5 and to the requirements of Sections 1002 through 1011.
  - Exception: As modified in Section 1205 for historic buildings.

 197

197

## 1001.2.2
## Change of occupancy classification or group

- Where the occupancy classification of a building changes, the provisions of Sections 1002 through 1011 shall apply.
- This includes a change of occupancy classification and a change to another group within an occupancy classification.
- Where the occupancy classification or group of a portion of an existing building is changed, Section 1012 shall apply.

 198

198

## Certificate of occupancy required
## 1001.3

- A certificate of occupancy shall be issued where a change of occupancy occurs that results in a different occupancy classification as determined by the IBC.

 199

199

## Special Use and Occupancy
## 1002.1

- Where the character or use of an existing building or part of an existing building is changed to a special use or occupancy as listed in the IBC chapter 4, the building shall comply with all of the applicable requirements of chapter 4 of the IBC
- 28 categories
- 1002.3 Change of occupancy in health care shall comply with the IBC for that use.
- 1002.4 Storage in I-2 occupancies equipped with an NFPA 13 Fire Sprinkler, <250 SF room shall be separated from the remainder of the building by construction capable of resisting the passage of smoke in accordance with IBC 509.4.2

 200

200

## ~~Compliance with Chapter 9~~ ~~1011.1.1~~ (2021)

- Change of occupancy is generally associated with an Alteration at some level. As such All change of occupancies are also an alteration.
- Refers user to IBC chapter 9 for changes requiring FS and FA

 201

201

## Electrical 1007

- Where the occupancy of an existing building or part of an existing building is changed to one of the following special occupancies as described in NEC, the electrical wiring and equipment of the building or portion thereof that contains the proposed occupancy shall comply with the applicable requirements of NEC whether or not a change of occupancy group is involved:

 202

202

## Electrical 1007

1. Hazardous locations.
2. Commercial garages, repair , and storage.
3. Aircraft hangars.
4. Gasoline dispensing and service stations.
5. Bulk storage plants.
6. Spray application, dipping, and coating processes.
7. Health care facilities.
8. Places of assembly.
9. Theaters, audience areas of motion picture and television studios, and similar locations.
10. Motion picture and television studios and similar locations.
11. Motion picture projectors.
12. Agricultural buildings.

 203

203

## Unsafe conditions 1007.2

- Where the occupancy of an existing building or part of an existing building is changed, all unsafe (electrical) conditions shall be corrected without requiring that all parts of the electrical system comply with the NEC.

 204

204

## Service upgrade 1007.3

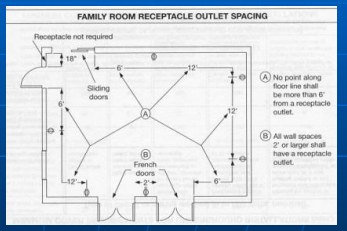
- Where the occupancy of an existing building or part of an existing building is changed, electrical service shall be upgraded to meet the requirements of the NEC for the new occupancy.

 205

205

## Number of electrical outlets 1007.4

- Where the occupancy of an existing building or part of an existing building is changed, the number of electrical outlets shall comply with the NEC for the new occupancy.




 206

206

## Mechanical requirements 1008.1

- Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to different kitchen exhaust requirements or to increased mechanical ventilation requirements in accordance with the IMC, the new occupancy shall comply with the intent of the respective IMC provisions.

 207

207

## Increased Plumbing Demand 1009.1

- Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the IPC, the new occupancy shall comply with the intent of the respective IPC provisions.

 208

208

## 1009.1 Exception (2021)

- Only where the occupant load of the story is increased by more than 20%, Plumbing fixtures for the story shall be provided in quantities specified in the IPC based on the increased occupant load.

 209

209

## Light and ventilation 1010.1

- Light and ventilation shall comply with the requirements of the IBC for the new occupancy.

 210

210

## Change of occupancy classification 1011

- The provisions of this section shall apply to buildings or portions thereof undergoing a change of occupancy classification.
- This includes a change of occupancy classification within a group as well as a change of occupancy classification from one group to a different group or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the IBC.


 211

211

## Change of occupancy classification 1011

- Such buildings shall also comply with Sections 1002 through 1010.
- The application of requirements for the change of occupancy shall be as set forth in Sections 1011.1.1 through 1011.1.4.
- A change of occupancy, as defined in Section 202, without a corresponding change of occupancy classification shall comply with Section ~~1001.2.~~ 1011.2

 212

212

## ~~Compliance with Chapter 9 1011.1.1~~

- ~~The requirements of Chapter 9 shall be applicable throughout the building for the new occupancy classification based on the separation conditions set forth in Sections 1011.1.1.1 and 1011.1.1.2.~~

 213

213

## ~~Compliance with Chapter 9 1011.1.1~~ (2021)

- Change of occupancy is generally associated with an Alteration at some level. As such, almost all change of occupancies are also an alteration.
- 1011.1 now refers user to IBC chapter 9 for changes requiring FS and FA

 214

214

## Change of occupancy classification with separation - 1011.1.1.2

- Where a portion of an existing building is changed to a new occupancy classification or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the IBC, and that portion is separated from the remainder of the building with fire barriers having a fire-resistance rating as required in the IBC for the separate occupancy, that portion shall comply with all of the requirements of Chapter 9 for the new occupancy classification and with the requirements of this chapter.

 215

215

## Fire sprinkler system 1011.2.1

- Where a change in occupancy classification occurs or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the IBC that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the IBC, such system shall be provided throughout the area where the change of occupancy occurs.


 216

216

## 1011.2.1

- Installation of the Automatic Fire sprinkler system is required within the area of change of occupancy and areas of the building not separated with one of the following:
  - Non-rated permanent partition and horizontal assemblies
  - Fire partition
  - Smoke Partition
  - Smoke Barrier
  - Fire Barrier
  - Fire Wall

 217

217

## Fire alarm and detection system 1011.2.2

- Where a change in occupancy classification occurs or where there is a change of occupancy within a space where there is a different fire protection system threshold requirement in Chapter 9 of the IBC that requires a fire alarm and detection system to be provided based on the new occupancy in accordance with Chapter 9 of the IBC, such system shall be provided throughout the area where the change of occupancy occurs.

 218

218

## Fire alarm and detection system 1011.2.2

- Existing alarm notification appliances shall be automatically activated throughout the building.
- Where the building is not equipped with a fire alarm system, alarm notification appliances shall be provided throughout the area where the change of occupancy occurs in accordance with Section 907 of the IBC as required for new construction.


 219

219

## Interior finish 1011.3

- In areas of the building undergoing the change of occupancy classification, the interior finish of walls and ceilings shall comply with the requirements of the IBC for the new occupancy classification.

 220

220

# Means of egress
## 1011.5

- Hazard categories in regard to life safety and means of egress shall be in accordance with Table 1011.5.
- When a change of occupancy classification is made to a higher hazard category (lower number) as shown in Table 1012.4, the means of egress shall comply with the requirements of Chapter 10 of the IBC.
  - Exceptions for stairways

**TABLE 1011.4**
**MEANS OF EGRESS HAZARD CATEGORIES**

| RELATIVE HAZARD | OCCUPANCY CLASSIFICATIONS |
|---|---|
| 1 (Highest Hazard) | H |
| 2 | I-2; I-3; I-4 |
| 3 | A; E; I-1; M; R-1; R-2; R-4, Condition 2 |
| 4 | B; F-1; R-3; R-4, Condition 1; S-1 |
| 5 (Lowest Hazard) | F-2; S-2; U |

 221

221

# Change of use to equal or lower hazard category - 1011.5.2

- When a change of occupancy classification is made to an equal or lesser hazard category (higher number) as shown in Table 1012.4, existing elements of the means of egress shall comply with the requirements of Section 905 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the IBC.
  - Exception: Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.

 222

222

# Heights and area
## 1011.6.~~1~~

**TABLE 1011.6 HEIGHTS AND AREAS HAZARD CATEGORIES**

| RELATIVE HAZARD | OCCUPANCY CLASSIFICATIONS |
|---|---|
| 1 (Highest Hazard) | H |
| 2 | A-1, A-2, A-3, A-4, I, R-1, R-2, R-4, Condition 2 |
| 3 | E, F-1, S-1, M |
| 4 (Lowest Hazard) | B, F-2, S-2, A-5, R-3, R-4, Condition 1, U |

- When a change of occupancy classification is made to a higher hazard category as shown in Table 1012.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the IBC for the new occupancy classification.
- When a change of occupancy classification is made to an equal or lesser hazard category as shown in Table 1012.5, the height and area of the existing building shall be deemed acceptable.
- Exception

 223

223

# Exterior wall ratings
## 1011.~~6.1~~ 7

**TABLE 1011.7 EXPOSURE OF EXTERIOR WALLS HAZARD CATEGORIES**

| RELATIVE HAZARD | OCCUPANCY CLASSIFICATION |
|---|---|
| 1 (Highest Hazard) | H |
| 2 | F-1; M; S-1 |
| 3 | A; B; E; I; R |
| 4 (Lowest Hazard) | F-2; S-2; U |

- When a change of occupancy classification is made to a higher hazard category as shown in Table 1012.6, exterior walls shall have fire resistance and exterior opening protectives as required by the IBC.

Exception: A 2-hour fire-resistance rating shall be allowed where the building does not exceed three stories in height and is classified as one of the following groups: A-2 and A-3 with an occupant load of less than 300, B, F, M, or S.

- When a change of occupancy classification is made to an equal or lesser hazard category, existing exterior walls, including openings, shall be accepted.

 224

224

## Opening protectives
## 1011.7.3

- Openings in exterior walls shall be protected as required by the IBC.
- Where openings in the exterior walls are required to be protected because of their distance from the property line, the sum of the area of such openings shall not exceed 50 percent of the total area of the wall in each story.

Exceptions:

1. Where the IBC permits openings in excess of 50%.
2. Protected openings shall not be required in buildings of Group R occupancy that do not exceed three stories in height and that are located not less than 3 feet from the property line.
3. Where exterior opening protectives are required, an automatic sprinkler system throughout may be substituted for opening protection.
4. Exterior opening protectives are not required when the change of occupancy group is to an equal or lower hazard classification in accordance with Table 1012.6

 225

225

## Vertical Shafts
## 1011.8

- Vertical shafts shall be designed to meet the IBC requirements for atriums or the requirements of 1011.8.1 through 1011.8.4

 226

226

## Fire wall alternative
## 1011.6.1.1

- In other than Groups H, F-1 and S-1, fire barriers and horizontal assemblies constructed in accordance with Sections 707 and 711, respectively, of the IBC shall be permitted to be used in lieu of fire walls to subdivide the building into separate buildings for the purpose of complying with the area limitations required for the new occupancy where all of the following conditions are met:
- 1. The buildings are protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Fire Code.

 227

227

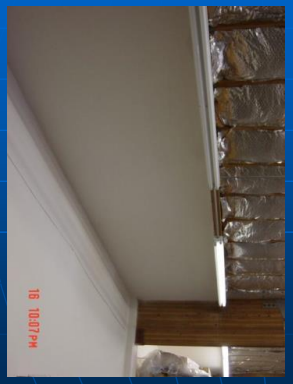
## Fire wall alternative
## 1011.6.1.1

- 2. The maximum allowable area between fire barriers, horizontal assemblies, or any combination thereof shall not exceed the maximum allowable area determined in accordance with Chapter 5 of the IBC without an increase allowed for an automatic sprinkler system in accordance with Section 506 of the IBC.
- 3. The fire-resistance rating of the fire barriers and horizontal assemblies shall be not less than that specified for fire walls in Table 706.4 of the IBC.

 228

228

## Fire barriers
## 1011.6.3



- When a change of occupancy classification is made to a higher hazard category as shown in Table 1011.5, fire barriers in separated mixed-use buildings shall comply with the fire resistance requirements of the IBC.
  - Exception: Where the fire barriers are required to have a 1-hour fire-resistance rating, existing wood lath and plaster in good condition or existing ½-inch-thick gypsum wallboard shall be permitted.

 229

229

## Opening protectives
## 1011.7.3

- Openings in exterior walls shall be protected as required by the IBC.
- Where openings in the exterior walls are required to be protected because of their distance from the property line, the sum of the area of such openings shall not exceed 50 percent of the total area of the wall in each story.

Exceptions:

1. Where the IBC permits openings in excess of 50%.
2. Protected openings shall not be required in buildings of Group R occupancy that do not exceed three stories in height and that are located not less than 3 feet from the property line.
3. Where exterior opening protectives are required, an automatic sprinkler system throughout may be substituted for opening protection.
4. Exterior opening protectives are not required when the change of occupancy group is to an equal or lower hazard classification in accordance with Table 1012.6

 230

230

## Vertical Shafts
## 1011.8

- Vertical shafts shall be designed to meet the IBC requirements for atriums or the requirements of this section.

 231

231

## Stairways
## 1011.8.2

- Where a change of occupancy classification is made to a higher hazard category as shown in Table 1011.4, interior stairways shall be enclosed as required by the IBC.

- Exceptions:

1. In other than Group I, an enclosure shall not be required for openings serving only one adjacent floor and that are not connected with corridors or stairways serving other floors.
2. Unenclosed existing stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by 1-hour fire-resistance-rated construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and the occupant space shall have at least one sprinkler head above the openings on the tenant side. The sprinkler system shall be permitted to be supplied from the domestic water-supply systems.
3. Existing penetrations of stairway enclosures shall be accepted if they are protected in accordance with the IBC.

 232

232

## Other vertical shafts 1011.8.3

- Interior vertical shafts other than stairways, including but not limited to elevator hoistways and service and utility shafts, shall be enclosed as required by the IBC when there is a change of use to a higher hazard category as specified in Table 1011.5.

  Exceptions:
  1. Existing 1-hour interior shaft enclosures shall be accepted where a higher rating is required.
  2. Vertical openings, other than stairways, in buildings of other than Group I occupancy and connecting less than six stories shall not be required to be enclosed if the entire building is provided with an approved automatic sprinkler system.

 233

233

## Openings 1011.8.4

- All openings into existing vertical shaft enclosures shall be protected by fire assemblies having a fire-protection rating of not less than 1 hour and shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector. All other openings shall be fire protected in an approved manner.
- Existing fusible link-type automatic door-closing devices shall be permitted in all shafts except stairways if the fusible link rating does not exceed 135ºF.

 234

234

## Additions 1101

- An addition to a building or structure shall comply with the International Codes as adopted for new construction without requiring the existing building or structure to comply with any requirements of those codes or of these provisions, except as required by this chapter.
- Where an addition impacts the existing building or structure, that portion shall comply with IEBC

 235

235

## Heights and Areas 1102

- No addition shall increase the height of an existing building beyond that permitted under the applicable provisions of Chapter 5 of the IBC for new buildings

 236

236

## ~~Smoke alarms in existing portions of a building - 1104.1~~

- Removed as it is already covered in the IBC and IRC

 237

237

## ~~Carbon monoxide alarms in existing portions of a building - 1105.1~~

- Taken out of 2021
- ~~Where an addition is made to a building or structure of a Group I-1, I-2, I-4 or R occupancy, the existing building shall be equipped with carbon monoxide alarms in accordance with Section 1103.9 of the *IFC* or Section R315 of the *IRC*, as applicable.~~

 238

238

## ~~Storm Shelters 1106~~

- ~~Where an addition is added to an existing Group E occupancy located in an area where the shelter design wind speed for tornados is 250 mph in accordance with Figure 304.2(1) of ICC 500 and the occupant load in the addition is 50 or more, the addition shall have a storm shelter constructed in accordance with ICC 500~~
- ~~Exceptions~~

 239

239

## 1104 Energy Conservation

- Additions to existing buildings shall conform to the energy requirements of the IECC or IRC as they relate to new construction.

 240

240

## Historic Buildings Chapter 12

- It is the intent of this chapter to provide means for the preservation of historic buildings.
- Historical buildings shall comply with the provisions of this chapter relating to their repair, alteration, relocation and change of occupancy.

 241

241

## Historic Buildings Chapter 12

- General Requirements
- Repairs
- Fire Safety
- Change of Occupancy
- Structural
- Relocated Buildings

 242

242

## Historic Buildings Chapter 12

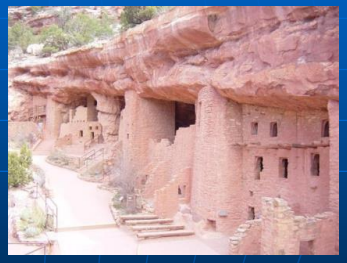
- 1201.2 Report
- A historic building undergoing alterations or change of Occupancy shall be investigated and evaluated. If it is intended that the building meet the requirements of this chapter, a written report shall be prepared and filed with the code official by a registered design professional
- The report shall describe each feature not in compliance with these provisions and demonstrate how the intent of the provisions is complied with in providing an equivalent level of safety.

 243

243

## Performance Compliance Method Section 1301

- Intent/scope
  - Maintain or increase current degree of public safety, health and general welfare in existing buildings while permitting repair, alteration addition and change of occupancy without requiring full compliance with IBC



 244

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## Change in Occupancy 1301.2.1

- Where an existing building is changed to a new occupancy classification and this section is applicable, the provisions of this section for the new occupancy shall be used to determine compliance with this code.

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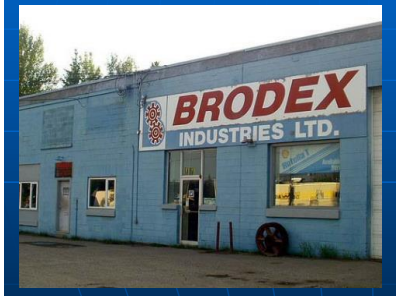
## Partial Change In Occupancy 1301.2.2




- Where a portion of the building is changed to a new occupancy classification, and that portion is separated from the remainder of the building as required by Table 508.4 of the IBC or R317 of the IRC for the separated occupancies, or with approved compliance alternatives, the portion changed shall be made to conform to the provisions of this section.

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## Partial Change In Occupancy 1301.2.2

- Portion of the building is changed to a new occupancy classification, and that portion is not separated from the remainder of the building as required by Table 508.4 of the IBC or R317 of the IRC for the separate occupancies, or with approved compliance alternatives, the provisions of this section which apply to each occupancy shall apply to the entire building.
- Where there are conflicting provisions, those requirements which secure the greater public safety shall apply to the entire building or structure.


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## Additions 1301.2.3

- Additions to existing buildings shall comply with the requirements of the IBC or the IRC for new construction.
- The combined height and area of the existing building and the new addition shall not exceed the height and area allowed by Chapter 5 of the IBC.
- Where a fire wall that complies with Section 706 of the IBC is provided between the addition and the existing building, the addition shall be considered a separate building.

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## Alterations 1301.2.4

- An existing building or portion thereof shall not be altered in such a manner that results in the building being less safe or sanitary than such building is currently
  - Exception: Where the current level of safety or sanita- tion is proposed to be reduced, the portion altered shall conform to the requirements of the International Building Code.

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## Acceptance 1301.3

- For repairs, alterations, additions and changes of occupancy to existing buildings that are evaluated in accordance with this section, compliance with this section shall be accepted by the building official.
  - Hazards must be abated
  - Must comply with IFC and IPMC

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## Investigation and Evaluation 1301.4

- For proposed work covered by this chapter, the building owner shall cause the existing building to be investigated and evaluated in accordance with the provisions of Sections 1301.4 through 1301.9.

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## Evaluation Process 1301.5

- Three categories of evaluation
  - Fire safety
  - Means of egress
  - General safety

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## Evaluation Process 1301.6

- Building evaluation considers following elements:
  - Building height
  - Building area
  - Compartmentation
  - Tenant and dwelling unit separation
  - Corridor walls
  - Vertical openings
  - HVAC systems
  - Automatic fire detection
  - Fire alarms systems

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## Evaluation Process (continued) Section 1301.6

- Building evaluation considers following elements:
  - Smoke control
  - Means of egress capacity and number
  - Dead ends
  - Maximum travel distance to an exit
  - Elevator control
  - Means of egress emergency lighting
  - Mixed occupancies
  - Sprinklers
  - Incidental use

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## Building Score Section 1301.7 – 1301.9

- Data entered into Summary Sheet (Table 1301.7) and building score determined
- Values in Table 1301.8 are mandatory safety scores based on occupancy and evaluation categories
- Mandatory score then subtracted from building score for each category
- Where final score in each category equals zero or more, building in compliance for that category
- Compliance in all three categories required for acceptance

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SUMMARY SHEET-BUILDING CODE

Existing occupancy _____ Proposed occupancy _____

Year building was constructed _____ Number of stories _____ Height in feet _____

Type of construction _____ Area per floor _____

Percentage of open perimeter increase _____ %

Completely suppressed: Yes _____ No _____ Corridor wall rating _____

Compartmentation: Yes _____ No _____ Required door closers: Yes _____ No _____

Fire-resistance rating of vertical opening enclosures _____

Type of HVAC system _____ , serving number of floors _____

Automatic fire detection: Yes _____ No _____ Type and location _____

Fire alarm system: Yes _____ No _____ Type _____

Smoke control: Yes _____ No _____ Type _____

Adequate exit routes: Yes _____ No _____ Dead ends: _____ Yes _____ No _____

Maximum exit access travel distance _____ Elevator controls: Yes _____ No _____

Means of egress emergency lighting: Yes _____ No _____ Mixed occupancies: Yes _____ No _____

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| SAFETY PARAMETERS | FIRE SAFETY (FS) | MEANS OF EGRESS (ME) | GENERAL SAFETY (GS) |
|---|---|---|---|
| 1401.6.1 Building Height<br>1401.6.2 Building Area<br>1401.6.3 Compartmentation | | | |
| 1401.6.4 Tenant and Dwelling Unit Separations<br>1401.6.5 Corridor Walls<br>1401.6.6 Vertical Openings | | | |
| 1401.6.7 HVAC Systems<br>1401.6.8 Automatic Fire Detection<br>1401.6.9 Fire Alarm System | | | |
| 1401.6.10 Smoke control<br>1401.6.11 Means of Egress<br>1401.6.12 Dead ends | * * * *<br>* * * *<br>* * * * | | |
| 1401.6.13 Maximum Exit Access Travel Distance<br>1401.6.14 Elevator Control<br>1401.6.15 Means of Egress Emergency Lighting | * * * *<br>* * * * | | |
| 1401.6.16 Mixed Occupancies<br>1401.6.17 Automatic Sprinklers<br>1401.6.18 Standpipes<br>1401.6.19 Incidental Use | | * * * *<br><br>÷2 = | |
| **Building score—total value** | | | |

* * * *No applicable value to be inserted.

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# Compliance Alternatives

EVALUATION FORMULAS[a]

| FORMULA | T1401.7 | T1401.8 | | SCORE | PASS | FAIL |
|---|---|---|---|---|---|---|
| FS - MFS ≥ 0 | _____ (FS) – | _____ (MFS) | = | _____ | _____ | _____ |
| ME – MME ≥ 0 | _____ (ME) – | _____ (MME) | = | _____ | _____ | _____ |
| GS – MGS ≥ 0 | _____ (GS – | _____ (MGS) | = | _____ | _____ | _____ |

a. FS = Fire Safety
ME = Means of Egress
GS = General Safety
MFS = Mandatory Fire Safety
MME = Mandatory Means of Egress
MGS = Mandatory Means of Safety

MANDATORY SAFETY SCORES[a]

| OCCUPANCY | FIRE SAFETY (MFS) | MEANS OF EGRESS (MME) | GENERAL SAFETY (MGS) |
|---|---|---|---|
| A-1 | 20 | 31 | 31 |
| A-2 | 21 | 32 | 32 |
| A-3 | 22 | 33 | 33 |
| A-4, E | 29 | 40 | 40 |
| B | 30 | 40 | 40 |
| F | 24 | 34 | 34 |
| M | 23 | 40 | 40 |
| R | 21 | 38 | 38 |
| S-1 | 19 | 29 | 29 |
| S-2 | 29 | 39 | 39 |

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# Relocated or Moved Buildings Chapter 14

- The building shall be safe for human occupancy as determined by the IFC and the IPMC. Any repair , alteration , or change of occupancy undertaken within the moved structure shall comply with the requirements of this code applicable to the work being performed. Any field-fabricated elements shall comply with the requirements of the IBC or the IRC as applicable.
- Location on the lot
- Foundation
- Wind Loads
- Seismic Loads
- Snow Loads
- Flood Hazard Areas
- Required inspection and repairs.

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# Construction Safegaurds

- Protection of adjoining property
- Covered walkways
- Temp use of streets
- MOE
- Accessibility

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